

SOME ISSUES IN THE STUDY OF PAPIAMENTU TONE

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1 Introduction

Raúl Römer (1977) first noted the contribution which pitch distinctions make to the interpretation of words and utterances in Papiamentu (PAP). That PAP employs tone is now widely recognized. Nonetheless, questions remain with regards to the function of tone in PAP and the interface between tone and other aspects of linguistic structure. In a typology of tone languages, the function of tone can be seen to range from purely lexical, contributing only to word meaning, to purely grammatical, marking morphosyntactic distinctions, and various possibilities in between. Furthermore, tone can range from being strictly associated with the word, to being phrasal, marking the boundaries of larger domains and thus making a contribution to the ease of processing of the acoustic signal.

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Previous authors, including Römer (1977, 1983, 1991), and, more recently, Devonish & Murray (1995) and Rivera-Castillo (1998), have treated tone in PAP as primarily a lexical phenomenon. I have argued instead that tone in PAP has a grammatical function, namely to mark a categorial distinction between verbs on the one hand and other lexical classes on the other hand (Kouwenberg, 2004). Despite his lexicalist approach, Römer's work actually goes beyond lexical tone to also consider a phrasal phenomenon which he named 'tone polarisation', whereby a toneless element acquires a contextually determined tone, namely one that contrasts with an immediately following tone. Since tone polarisation goes across word boundaries, it suggests that tone in PAP is also a phrasal phenomenon. This ties in with the question of function: were tone purely lexical, it would hardly be expected to have effects across word boundaries.

In this paper, I will briefly set out the arguments for rejecting a lexical basis for tone in PAP. I then turn to the existence of toneless function words and the phenomenon of tone polarisation, and consider what it may tell us about the phrasal status of tone in this language. I will argue that tone polarisation has a syntactic function, namely to mark the integration of an element into a syntactic domain. In other words, I am

increasingly convinced by the evidence that *all* tone in PAP is grammatical rather than lexical. It is my long-term goal to provide a fuller account of tone in PAP. Here, I will only indicate some areas of uncertainty. We shall see that many aspects of the grammar of Papiamentu are still insufficiently described and poorly understood, and that there is ample scope for research on the prosody-syntax interface in Papiamentu.

2 Background: Tone in Papiamentu

As pointed out, the relevance of pitch in PAP was first recognized by Römer (1977). He described two pitch levels, high (H) and low (L), with downdrift in declarative contexts. Devonish & Murray (1995), Rivera-Castillo & Pickering (2004) and Remijsen & Van Heuven (2005) have shown that the phonetic realisation of tone is more complicated than suggested by Römer's two pitch levels, involving a falling contour rather than a level low tone, for instance. Nonetheless, at the phonological level, Römer's basic insight of a system involving two tone levels has not been challenged. This paper addresses phonological rather than phonetic behavior of tone. Römer presented data which, at first blush, suggest that tone is used to mark lexical contrasts. Take for instance the pair *mata* 'to kill' (LH melody) vs. *mata* 'plant' (HL melody), both with initial stress. Joubert (2002: 351-359) lists 270 similarly contrasting pairs. A selection follows:

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Table 1 Tone contrasts

LH melody	HL melody	LH melody	HL melody
arma 'to arm'	arma 'weapon'	benta 'musical instrument'	benta 'sale'
faha 'to gird'	faha 'belt'	bèrdè 'real, really'	bèrdè 'green'
horka 'to hang'	horka 'gallows'	dori 'toad (sp.)'	dori 'two-wheel carriage'
kaska 'to peel'	kaska 'peel, rind'	pika 'to sting, burn'	pika 'hot, peppery'
mancha 'to stain'	mancha 'stain'	pura 'to hurry'	pura 'pure'
onra 'to honor'	onra 'honor'	seka 'to dry'	seka 'near'
reina 'to reign'	reina 'queen'	tutu 'black bean dish'	tutu 'marrow'
skuma 'to foam'	skuma 'foam'	papa 'father'	papa 'pope, porridge'

We have here *prima facie* a good case for postulating lexical tone contrasts. But closer inspection raises questions about the restricted nature of tone contrasts, and its correlation with word length and category. Summarizing from Kouwenberg (2004):

(i) Tone contrasts are restricted to bisyllabic, vowel-final words. In other words, no tone contrasts seem to be possible on monosyllabic words or on words of three or more syllables. If tone were truly lexical, such a restriction would be surprising.

(ii) In the majority of cases, the members of the contrasting pairs show a difference in word category, such that the LH melody is associated with a verb, the HL melody with a word of a non-verbal category, mainly nouns. Around two-third of Joubert's 270 pairs consist of a verb and a related deverbal noun. Some examples are provided in the first two columns of table 1. The pairs in the right-hand columns are far less typical. If tone were purely lexical, a correlation with word class would be surprising. This correlation is further supported by the observation that vowel-final verbs of any length, without exception, have H on the final syllable. Nouns, adjectives and adverbs, on the other hand, display variation in tone melody.

Considering content vocabulary only, lexical words generally conform to a prosodic minimality condition, which requires that a prosodic word in PAP is at minimum bimoraic and carries at least one high tone (Kouwenberg & Murray, 1994: 12). With few exceptions, verbs receive a final H and in *all* cases, the final H-toned syllable of a verb in PAP is light. Tone assignment in nouns, adjectives and adverbs takes place in a very different manner, through a quantity sensitive algorithm. Trochaic feet are constructed from the right edge. If the final syllable is heavy, it receives H, otherwise the prefinal syllable receives H. This accounts for the more variable placement of H in the non-verbal categories. PAP can thus be characterized as a pitch-accent language. This means that the most prominent syllable in a word is usually associated with a high tone. In the case of nonverbal lexical items, prominence is clearly determined by quantity; for verbs, on the other hand, it is fixed on the final syllable. In Kouwenberg (2004) I argue, based on these facts, that tone can be considered to have a grammatical function in PAP, namely that of marking word category.

Note that earlier work assumed that a tone melody was assigned to words. I submit instead that the surface melody is predictable from the initial placement of a high tone. In the case of verbs, the final H of verbs is preceded by a sequence of low tones. In the case of nonverbal categories, we see the manifestation of a preference for alternating tones, resulting in HL sequences where the length of the word permits. In other words, the surface melody of nonverbal content words evokes an essentially rhythmic pattern.

3 The tone of function words

In Kouwenberg (2007), I consider the tonal behavior of function words. Quite a few function words fail to conform to prosodic minimality: they are mostly monomoraic, and also mostly—though not all—toneless. Monomoraicity and tonelessness thus characterize a class of prosodically deficient function words. Those function words which are at least bimoraic have word status and therefore carry a H tone, like lexical

words. Focusing on pronouns, I argued that prosodic deficiency provides evidence of a series of weak pronouns, which contrasts with a series of strong, independent pronouns. I argued, furthermore, that restrictions on their syntactic positions show that the weak pronouns are syntactic clitics—the PAP equivalent of the “rich” morphology of the Romance languages.

So how do these toneless forms surface? For this we turn to Römer’s tone polarisation. He showed that toneless function words receive a tone in opposition to that of an immediately following syllable, subject to syntactic conditions which are not yet fully understood.¹ Based on Römer (1977, 1983), the tonality of monomoraic function words can be characterized as follows:

(1) (a) H-toned are:

- the preverbal markers *ta* [TNS] and *a* [PERF]
- the preverbal negator *no* [NEG]
- the definite and indefinite articles *e* and *un*

(b) L-toned is: the focus marker *ta* [FOCUS]

(c) toneless, hence subject to tone polarisation, are:

- the singular pronouns *mi*, *bo*, *e* [1s, 2s, 3s]
- the irrealis mood marker *lo* [MOOD]
- the copula *ta* [BE]
- the functional prepositions *di* ‘of’, *ku* ‘with’, *na* ‘at’, *pa* ‘for’, *i* ‘and’, *ò~òf* ‘or’
- the finite complementizer and relative clause introducer *ku* [COMP]

We see here roughly three types of grammatical forms: those which are part of the functional projections above the VP (tense/mood/aspect markers, subject pronouns), those which are part of the functional projections above the DP (articles, functional prepositions), and those which are peripheral to the clause (focus marker, complementizer). We see an apparent lack of uniformity in the tonal character of these forms.

This impression is strengthened when we consider the phenomenon of tone polarization. At first blush, it seems to be subject to a fairly haphazard set of syntactic constraints. I aim ultimately to show that there is in fact full predictability, and that the seemingly H- and L-toned function words in (a) and (b) are actually toneless, but receive an invariant tone due to their syntactic position. Here, I will merely make a first attempt at considering the tonal behavior of some toneless function words.

¹ In a given PAP utterance, tonelessness is not restricted to monosyllabic function words: the final syllables of content words with a predictable high tone on the penultimate syllable are also toneless. These toneless syllables are similarly subject to tone polarization. I will not consider this phenomenon here.

4 Tone polarisation

Let us consider the data, as set out in Römer's work. Here, diacritics will be used to mark L and H tones. We should note that PAP orthography uses diacritics to mark vowel quality, not tone. In the data cited here, no vowels appear which would normally need to be orthographically marked. In (2a), we see where copula *ta* surfaces with L. Its tone contrasts with the immediately following H of *bon*. Moreover, tone polarisation has iterated leftward from *bon*, affecting first copula *ta* before reaching *mi*. The result is a string of alternating H and L tones. A similar process of iteration has taken place in (2b), with opposite tonal results. We see here that tone polarisation moves leftwards.

- (2) (a) mí tà bón
1s BE good 'I am well'
(b) mì tá sàlú
1s BE healthy 'I am healthy' (Römer, 1991:10 [1977:75])

The variation in the melody of *mi* and *ta* shows that these morphemes receive their tones post-lexically. The question is why their surface tone should vary. An answer may be found in the general properties of tone in PAP. As pointed out in the preceding section, a single H is assigned to the accented syllable of a nonverbal prosodic word, but - subject to conditions which are as yet insufficiently explored (see Remijsen & Van Heuven, 2005) - alternating H and L tones appear in the surface realisation of polysyllabic forms. The assignment of tone to *mi* and *ta* in (2) clearly follows this rhythmic pattern - although extending outside the domain of the word.

As argued by Akinlabi & Liberman (2000), sequences of unlike tones, such as [high low] or [low high], form tonal complexes. Tone polarisation thus provides evidence of the incorporation of toneless forms into a tonal complex. The incorporation into a tonal complex provides prosodic licensing for the toneless pronoun. That licensing is necessary follows from the fact that at the PF level, all phonetic content has to be incorporated into prosodic structure (e.g., Anderson, 2005:39).

5 When tone polarisation fails

Tone polarisation does not always apply. According to Römer (1991:6 [1977:72]), polarisation fails to iterate from a polarising preposition. This is seen in (3). Tone polarisation has affected *na* 'at', which receives a tone contrasting with the initial tone of *porta* 'door' and *bentana* 'window'. Copula *ta*, on the other hand, fails to polarise, and surfaces with H in both cases, irrespective of the tone of the following

preposition. This shows us that H is assigned as default tone. Note that the subject pronoun *mi* receives a polarised L tone.

- (3) (a) *mì tá nà pórtà*
 1s BE LOC door ‘I am at the door’
 (b) *mì tá ná bèntánà*
 1s BE LOC window ‘I am at the window’ (Römer 1991:10 [1977:75])

This failure of tone polarisation to extend leftward from a polarising preposition cannot be simply related to the presence of a PP boundary: As seen in (4), *ta* dutifully polarises when it precedes lexical prepositions.

- (4) (a) *é kás tà ríbà sérù*
 the house BE on hill ‘The house is on the hill.’
 (b) *é kás tá ènfréntè dí tèàtrò*
 the house BE front of theatre ‘The house is in front of the theatre.’
 (Römer, 1977:71)

A further contrast is seen in (5), where the toneless preposition *pa* fails to polarise with toneless *na* in (a-b), surfacing with default H. But it polarises with the contracted form *n’é* in (c), which carries the inherent high tone of the definite article. It appears that where a pre-specified tone is available, as is the case for prepositions which have prosodic word status, or for a toneless preposition contracted with a H-toned article, polarisation takes place.

- (5) (a) *ésún pá ná mùráyà*
 one for LOC wall ‘the one for hanging on the wall’
 (b) *ésún pá nà é bèntánà*
 one for LOC the window ‘the one for fitting on the window’
 (c) *ésún pà n’é bèntánà*
 one for LOC-the window ‘the one for fitting on the window’
 (Römer, 1977:72-3)

Römer points out that polarisation fails also where the toneless function word is in focus. Instead, a string of low-toned syllables is produced:

- (6) *lò tà pà nà bèntánà*
 MOOD COP for LOC window ‘(it) will be for fitting on the window’ (Römer, 1991:10)

The focus marker *ta* is similarly low-toned (see 1b). This suggests that focus involves the assignment of a low tone at the left boundary. In the absence of focus, there is no

such effect, as was seen in (3), where the pronoun in absolute initial position displayed polarisation.

6 Final remarks

A toneless function word “looks” to the right to determine what its tone should be—for instance to the initial tone of a following PP. This suggests that the failure of tone polarisation to take place in (5) a-b is related to the tonelessness of the preposition, and that its tonelessness is not resolved in time for any preceding material to derive its tone from it. This suggests that the iterative application of polarisation is restricted by syntactic boundaries: polarisation can iterate only within certain syntactic domains. Thus, leftward iteration from copula *ta* to preceding functional material such as the mood marker *lo* or a subject pronoun, is possible. In these cases, the toneless copula first acquires a tone in contrast with the initial tone of the material to its right, followed by leftward iteration of this process.

Focus is tonally marked by a low tone at the left boundary. This low tone manifests itself on the focus particle *ta*, if present, or on other toneless material. Where tone polarisation fails altogether, a default high tone is assigned.

REFERENCES

- Akinlabi, Akin & Mark Liberman (2000). *Tonal complexes and tonal alignment*. Paper presented at NELS 31, Oct. 6-8, Georgetown University.
- Anderson, Stephen R. (2005). *Aspects of the theory of clitics*. (Oxford Studies in Theoretical Linguistics; 11). Oxford: Oxford University Press.
- Devonish, Hubert & Eric Murray (1995). On stress and tone in Papiamentu: an alternative analysis. In Hubert Devonish (Ed.) *UWiling: Working papers in linguistics*, 1 (pp. 43-57). Mona: University of the West Indies.
- Joubert, Sidney M. (2002³). *Dikshonario Papiamentu-Hulandes, Handwoordenboek Papiaments-Nederlands*. (First published in 1991). Curaçao: Fundashon di Leksikografia.
- Kouwenberg, Silvia (2004). The grammatical function of Papiamentu tone, *Journal of Portuguese Linguistics*, 3, 55-69.
- Kouwenberg, Silvia (2007). The prosody-syntax interface and the status of pronouns in Papiamentu. *Journal of Portuguese Linguistics*, 5/6, 203-225.

- Kouwenberg, Silvia & Eric Murray (1994). *Papiamentu*. (Languages of the world/Materials; 68). München: Lincom Europa.
- Remijsen, Bert & Vincent Van Heuven (2005). Stress, tone and discourse prominence in the Curaçao dialect of Papiamentu. *Phonology*, 22, 205-235.
- Rivera-Castillo, Yolanda (1998). Tone and stress in Papiamentu: The contribution of a constraint-based analysis to the problem of creole genesis. *Journal of Pidgin and Creole Languages*, 13, 2, 297-334.
- Rivera-Castillo, Yolanda & Lucy Pickering (2004). Phonetic correlates of stress and tone in a mixed system. *Journal of Pidgin and Creole Languages*, 19, 2, 261-284.
- Römer, Raul G. (1977). Polarization phenomena in Papiamentu [reprinted in Römer 1991]. *Amsterdam Creole Studies*, I, 69-79.
- Römer, Raul G. (1983). Papiamentu tones. In Enrique Muller (Ed.), *Papiamentu: Problems and possibilities* (pp. 85-96). Zutphen: De Walburg Pers.
- Römer, Raul G. (1991). *Studies in Papiamentu tonology* (Caribbean Culture Studies; 5). Amsterdam /Kingston: University of Amsterdam /University of the West Indies.